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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,999

12/09/2005

Kensuke Itakura

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

STANLEY, JANE L

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

06/25/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/559,999	Applicant(s) ITAKURA ET AL.	
	Examiner JANE L. STANLEY	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20051209</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because of undue length i.e. greater than 15 lines. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-6 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5-6 and 9, recites the limitation "The process for producing a granular detergent ..." in the preamble of each respective claim. There is insufficient antecedent basis for this limitation in the claim. Clarification could be achieved by replacing "The process" with "A process".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa et al. (EP 384480 A2).

Ishikawa et al. teaches the process of forming low moisture (Table 1 In 49) containing flakes of α -sulfo fatty acid alkylester salt that can be used in high concentration (pg 3 In 6-7) to form a high-density detergent (pg 4 In 2-12). Furthermore, as **claim 4** is a product-by-process claim, patentability of said claim is based on the recited product and does not depend on its method of production. Since the product in **claim 4** is the same product disclosed by Ishikawa et al. the claim is unpatentable even though the Ishikawa et al. product was made by a different process. *In re Marosi*, 710 F2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Magari et al. (US 4,416,809).

Magari et al. teaches the process of making α -sulfo fatty acid alkyl ester salts combined with fatty acid soap and polycarboxylic acid salt (detergent components) into granular detergents compositions (abstract; col 4 In 5-22) via spray drying an aqueous slurry (col 3 In 48-61) and/or a powder or granule mixing process (col 4 In 17).

Furthermore, as **claim 8** is a product-by-process claim, patentability of said claim is based on the recited product and does not depend on its method of production. Since the product in **claim 8** is the same product disclosed by Magari et al. the claim is unpatentable even though the Magari et al. product was made by a different process. *In re Marosi*, 710 F2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Fukutome et al. (JP 2979727, see English machine translation).

Fukutome et al. teaches a process of making high bulk density α -sulfo fatty acid alkylester salt-containing detergents wherein an aqueous slurry of α -sulfo fatty acid alkylester salt particles are spray dried ([0040]) and said slurry can also contain other components i.e. zeolite etc. ([0029], ln 1-3) (detergent component). Fukutome further teaches the process wherein the spray dried product is combined with a builder (detergent component) and then kneaded and subsequently crushed ([0031]-[0032]).

Regarding the method limitations recited in **claim 8** the examiner notes that even though *a product-by-process is defined by the process steps by which the product is made, determination of patentability is based on the product itself. In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). As the court stated in Thorpe, 777 F.2d at 697, 227 USPQ at 966 (The patentability of a product does not depend on its method of production. In re Pilkington, 411 F.2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969).* If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.). See MPEP 2113.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tano et al. (WO 01/00572, using US 6,657,071 as English language equivalent for citations) in view of Ishikawa et al. (EP 0 384 480 A2).

Regarding claim 1, Tano et al. teaches a process for producing α -sulfo-fatty acid alkyl ester salt powder particles (col 4 ln 22-34; col 12 ln 33-35) comprising a sulfonation step bringing a fatty acid alkyl ester into contact with a sulfonating gas, an esterification step for esterifying the product of the sulfonation step with a lower alcohol, neutralizing the esterified product of the esterification step to obtain a neutralized product, and a bleaching step for bleaching the neutralized product (col 4 ln 22-31) to form a slurry (see Figure 1) wherein the final active ingredient concentration, α -sulfo fatty acid alkylester salt and α -sulfo fatty acid alkylester disodium salt combined, is 70.1 wt% (col 18 ln 10-14).

Tano et al. does not teach the steps of aging the paste or the powder, flakes or pellets. However, Tano et al. teaches the step of aging/heat treating the products of the various reaction steps at different points in the synthesis of the α -sulfo fatty acid

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alkylester salt, i.e. after sulfonation (col 8 ln 20-23) and between the steps of neutralizing and bleaching (col 11 ln 31-39), and that the step can be optional (Figs 1 and 10; col 8 ln 26). Tano et al. further teaches that such steps are useful for improving the color of the final product (col 14 ln 13-14). It is also noted that Tano et al. teaches a heat-treating related process of purification of the final product i.e. flush method (col 11 ln 55-60), said method being used to drive off low molecular weight impurities resulting in a product with improved odor characteristics (col 11 ln 62-64). Since it is recognized that color and odor of the final product are variables to be controlled, one of ordinary skill in the art would have appreciated that color and odor could be optimized. The addition/inclusion of an aging/heat-treating step to the final compound, both before and after forming into powder, flakes or pellets would have been obvious to one of ordinary skill in the art in order to improve the color and odor characteristics of the final product (col 11 ln 62-64).

While Tano et al. does not directly teach that the product is in a pasty form, since Tano et al. renders the process obvious the product being in pasty form is implicit. Furthermore, Tano et al. teach that the viscosity of the product is dependent on the concentration of lower molecular weight alcohol used in the esterification step and that one of ordinary skill in the art would easily be able to manipulate the property of viscosity i.e. consistency in the resulting product.

Tano et al. also does not directly teach making the product into the flakes or pellets containing equal to or less than 10 wt% of water. However, Ishikawa et al. teaches a process of forming low moisture (i.e. 4.9 wt% moisture, example 1 Table 1 ln

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49; See all examples, Table 1) containing flakes of α -sulfo fatty acid alkylester salt from paste material that can be used to form a high-density detergent (pg 4 ln 2-12).

Ishikawa et al. and Tano et al. are combinable because they are concerned with the same field of endeavor, namely the process of making α -sulfo fatty acid alkylester salt-containing detergent compositions. At the time of the invention a person having ordinary skill in the art would have found it obvious to use the process of Ishikawa et al. in the process of Tano et al. and would have been motivated to do so to form low moisture content flakes of α -sulfo fatty acid alkylester salt suitable for high-density granular detergents (Ishikawa et al. pg 2 ln 46-47).

Regarding claim 3, Tano et al. further teaches the process wherein the fatty acid alkyl ester used has an iodine value of 0.5 or less (col 5 ln 63-64) (this obviates the instant claimed iodine value of 1 or less).

Regarding claim 4, Tano et al. teaches the process of making α -sulfo fatty acid alkylester salt as set forth in **claim 1** and further teaches that said α -sulfo fatty acid alkylester salt can be made into powder, particles etc by conventional methods to obtain commercial products (col 3 ln 43-44). Furthermore, as **claim 4** is a product-by-process claim, patentability of said claim is based on the recited product and does not depend on its method of production. Since the product in **claim 4** is the same product disclosed by Tano et al. the claim is unpatentable even though the Tano et al. product was made by a different process. *In re Marosi*, 710 F2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tano et al. (WO 01/00572, using US 6,657,071 as English language equivalent for citations) in view of Ishikawa et al. (EP 0 384 480 A2) as applied to **claim 1** above, and further in view of Magari et al. (US 4,416,809).

Tano et al. in view of Ishikawa et al. renders the process of **claim 1** obvious as set forth above.

Tano et al. does not teach the process further comprising a step of mixing the powder, flakes, or pellets with an inorganic powder having an average particle diameter of 0.1-100 μm , in an amount of 1-40 wt%. However, Magari et al. teaches a process of making granular or powdered detergent compositions by mixing the α -sulfo fatty acid alkylester salt, in powder, particle or granule form (col 3 ln 50-55) with zeolites (col 4 ln 3) (inorganic powder) wherein the zeolite is present at 15% of the composition and has an average particle size of 1.3 μm (Example 4; Table 1, A-type zeolite) (this obviates the instant claimed inorganic powder amounts and average particle diameter as outlined above). Magari et al. and Tano et al. are combinable because they are concerned with the same field of endeavor, namely the process of making α -sulfo fatty acid alkylester salt-containing detergent compositions. At the time of the invention a person having ordinary skill in the art would have found it obvious to use the process of Magari et al. in the process of Tano et al. and would have been motivated to do so to form a granular detergent wherein the α -sulfo fatty acid alkylester salt component is resistant to hydrolysis during processing, i.e. spray drying, by utilizing a neutral builder, i.e. zeolite (Magani et al. col 4 ln 10-15).

Claims 5-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tano et al. (WO 01/00572, using US 6,657,071 as English language equivalent for citations) in view of Ishikawa et al. (EP 0 384 480 A2) as applied to **claim 1** above, and further in view of Fukutome et al. (JP 2979727, see English machine translation).

Regarding claim 5, Tano et al. in view of Ishikawa et al. renders the process of **claim 1** obvious as set forth above.

Tano et al. does not teach the process of combining the powder, flakes or pellets together with a detergent component by any method listed in the instant Markush group. However, Fukutome et al. teaches a process of making high bulk density α -sulfo fatty acid alkylester salt-containing detergents wherein the α -sulfo fatty acid alkylester salt particles are mixed with alkali builders and binders ([0005] In 10-11) and/or surface active agents ([0007] In 7) (detergent component) by the method of kneading and subsequent crushing ([0005] In 11). Fukutome et al. and Tano et al. are combinable because they are concerned with the same field of endeavor, namely methods of making α -sulfo fatty acid alkylester salt-containing detergent compositions. At the time of the invention a person having ordinary skill in the art would have found it obvious to process by the kneading and subsequent crushing of Fukutome et al. the α -sulfo fatty acid alkylester salt of Tano et al. and would have been motivated to do so to avoid loss of yield due to the dried powder adhering to the equipment and/or to avoid non-uniformity of the final detergent particles (Fukutome et al., [0004], In 6-10).

Regarding claims 6-7, Tano et al. in view of Ishikawa et al. renders the process of **claim 1** obvious as set forth above.

Tano et al. does not teach the process of mixing the powder, flakes or pellets together with a detergent component and water to give a slurry that is then spray dried nor does Tano et al. teach the process of further mixing the granular detergent with a detergent component by a method selected from the Markush group of the instant **claim 7**. However, Fukutome et al. teaches a process of making high bulk density α -sulfo fatty acid alkylester salt-containing detergents wherein the α -sulfo fatty acid alkylester salt particles are mixed with 40% water to form a slurry and then spray drying ([0040]) and said slurry can also contain other components i.e. zeolite etc. ([0029], In 1-3) (detergent component). Fukutome further teaches the process wherein the spray dried product is combined with a builder (detergent component) and then kneaded and subsequently crushed ([0031]-[0032]). Fukutome et al. and Tano et al. are combinable because they are concerned with the same field of endeavor, namely methods of making α -sulfo fatty acid alkylester salt-containing detergent compositions. At the time of the invention a person having ordinary skill in the art would have found it obvious to process by the spray-drying followed by kneading and subsequent crushing of Fukutome et al. the α -sulfo fatty acid alkylester salt of Tano et al. and would have been motivated to do so to avoid loss of yield due to the dried powder adhering to the equipment and/or to avoid non-uniformity of the final detergent particles (Fukutome et al., [0004], In 6-10).

Regarding claim 9, Tano et al. in view of Ishikawa et al. renders the process of **claim 1** obvious as set forth above.

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Tano et al. does not teach the process of producing a solid detergent comprising mixing and kneading the powder, flakes or pellets together with a detergent component. However, Fukutome et al. teaches a process of making high bulk density α -sulfo fatty acid alkylester salt-containing detergents wherein the α -sulfo fatty acid alkylester salt particles are mixed with alkali builders and binders ([0005] In 10-11) and/or surface active agents ([0007] In 7) (detergent component) and kneaded ([0005] In 11). Fukutome et al. and Tano et al. are combinable because they are concerned with the same field of endeavor, namely methods of making α -sulfo fatty acid alkylester salt-containing detergent compositions. At the time of the invention a person having ordinary skill in the art would have found it obvious to process by the kneading and subsequent crushing of Fukutome et al. the α -sulfo fatty acid alkylester salt of Tano et al. and would have been motivated to do so to avoid loss of yield due to the dried powder adhering to the equipment and/or to avoid non-uniformity of the final detergent particles (Fukutome et al., [0004], In 6-10).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JANE L. STANLEY whose telephone number is (571)270-3870. The examiner can normally be reached on Monday-Thursday, 7:30 am - 5 pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARK EASHOO/
Supervisory Patent Examiner, Art Unit 1796
20-Jun-08

JLS